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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kia Silverbrook

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SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER

MISLEH, JUSTIN P

ART UNIT

PAPER NUMBER

2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/729,157	Applicant(s) SILVERBROOK, KIA	
	Examiner JUSTIN P. MISLEH	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09112774.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed September 24, 2008 have been fully considered but they are not persuasive.
2. Applicant argues, "The printhead (5) of Suzuki does not extend across the width of the recording medium (11)."
3. The Examiner respectfully disagrees with Applicant's position. Suzuki clearly discloses, in column 16, lines 17-24, a bubblejet type printhead that spans the width of the recording medium. Therefore, the Examiner will maintain the rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 3-6 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 5,847,836) in view of Yuen (US 6,347,863 B1).
6. For **Claims 1 and 8**, Suzuki discloses, as shown in figures 1 and 2, a printhead assembly (P) for a camera system (1) having a chassis (not labeled; but clearly shown in figure 1) and a platen assembly (10, 68, 6, 18, etc.) that is mountable on the chassis (again clearly shown in

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figure 1), the platen assembly (10, 68, 6, 18, etc.) defining a printing path (a→, ←b) along which a print medium (11) is passed, the print head assembly (P) comprising:

an elongate ink reservoir assembly (5) substantially spanning a width of the printing path (see column 16, 17-24), the elongate ink reservoir defining at least three ink reservoirs (By using an “integrated printhead”, as indicated in Suzuki, to provide a multi-color print mode; the ink reservoir assembly must be divided into separate sections that each contain ink of a different color. Of course, each one of those different sections must be provided with an ink path that opens at the outlet.);

a guide assembly (not specifically shown; but necessary for proper operation) positioned in the ink reservoir assembly (5), the guide assembly defining *a plurality of discrete ink paths* facilitating fluidic communication between each of the at least three ink reservoirs and an outlet of the elongate ink reservoir assembly (By using an “integrated printhead”, as indicated in Suzuki, to provide a multi-color print mode; the ink reservoir assembly must be divided into separate sections that each contain ink of a different color. Of course, each one of those different sections must be provided with an ink path that opens at the outlet.); and

at least one *electrical component* (the combined total of all “electrothermal transducer” in the ink reservoir assembly) positioned at the outlet (the total of all “discharge opening”/”discharge nozzles”) of the elongate ink reservoir assembly, the at least one *electrical component* (the combined total of all “electrothermal transducer” in the ink reservoir assembly) substantially spanning a width of the printing path (see column 16, lines 17-24).

Suzuki at least discloses a bubblejet type printhead that spans the width of the recording medium. The printhead ink reservoir assembly may be a multi-color printhead that is comprised

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of a series of adjacent ink reservoirs, each with at least one ink channel and a plurality of corresponding discharge nozzles and discharge openings, or a single integrated ink reservoir with a plurality of ink channels therein each with corresponding discharge nozzles and openings. In either case, the bubble jet print heads require an electrical component, at the base of each ink channel, in the discharge nozzles to generate the ink bubbles. Suzuki doesn't specify the details of the electrical component, but incorporates the specific printhead technology by reference, via US Patent 4,558,333 (Sugitani et al.).

Sugitani et al. further specify, as shown in figure 11 and as stated in column 7 (lines 13 – 22), “Although not shown in the drawing, electrodes for input of signals are connected to these heating elements 302. As the connection method to be employed in this case, there may be utilized the multi-layer wiring method recently employed in semiconductor industries, in which electrically insulating films such as of SiO₂, Si₃N₄, polyimide, etc. and electroconductive films such as of Al, Au, etc. are arranged alternately by forming said electroconductive films according to photolithography to constitute a desired wiring pattern” (emphasis added by Examiner). This constitutes the teaching of a printhead integrated circuit for each ink reservoir. Additionally, Sugitani et al. clearly show, in figures 9 – 11, where each ink reservoir includes at least three discrete ink paths (discharging orifices 207) and a corresponding set of at least three inlet apertures (discharging orifices 207), each of the inlet apertures (207) being aligned with a respective ink path. Thus, Suzuki and Sugitani et al. by incorporation disclose at least one printhead integrated circuit that is positioned in the outlet to span the printing path, as claimed.

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7. As for **Claim 2**, Yuen teaches, as shown in figure 3, in which the ink reservoir assembly defines three ink reservoirs (16, 18, and 20) and the guide assembly defines three discrete ink paths (side internal walls 58).

8. As for **Claim 3**, Suzuki discloses, as indicated above, that the printhead maybe single integrated multicolor ink reservoir assembly that is elongate to span the printing path where the printhead integrated circuits are mounted in the opening of the ink reservoir assembly.

Yuen further teaches, as shown in figure 3, the ink reservoir assembly including a base member (lower part of cartridge; e.g., 14 in figure 1) and a cover member (upper part of cartridge; e.g., 12 in figure 1), the cover member (12) having a roof wall, a pair of opposed side walls and a pair of spaced inner walls (clearly shown in figure 3), the side walls and the inner walls depending from the roof wall and being generally parallel to each other (see arrangement of side internal walls 58) and the base member having a floor and a pair of opposed end walls and defining an opening (clearly shown in figure 3), the guide assembly being interposed between lower ends of the inner walls and the floor (The Examiner considers the guide assembly to correspond to the side internal walls 58 residing in the base member, e.g., 14 in figure 1) again. Also, see figure 3).

The Examiner respectfully notes that Yuen, when combined with Suzuki (and Sugitani et al. by reference), would result in a printhead that is elongated to span the printing path.

Furthermore, the guide assembly and each individual ink reservoir would additionally be elongated to span the printing path. Nevertheless, the side profile shown in Yuen's figure 3 would be similar to the side profile of the elongated printhead as a result of the combination.

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9. As for **Claim 4**, Yuen clearly shows in figure 3, wherein in which the guide assembly includes a pair of guide walls (side internal walls 58 residing in the base member) that extend from respective lower ends (portion where cover member 12 and base member 14 join together) of the inner walls inwardly towards the elongate opening to define the three distinct ink paths that terminate at respective sets of inlet apertures of the printhead integrated circuits (The Examiner considers the fact that the guide walls extend from the lower end of the cover member 12 to the lower end of the base member 14 to correspond to the “inwardly towards the elongate opening”. The Examiner respectfully notes that the claim language does not specify that the guide walls must be non-parallel with respect to each other).

10. As for **Claim 5**, neither Suzuki nor Yuen specify the material or method of construction of the printhead ink reservoir assembly. While Yuen shows, in figure 3, a molded assembly; Yuen doesn't specify a plastics material.

However, the Examiner respectfully takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of molding printhead cartridges out of a plastics material are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have molded the printhead cartridges out of a plastics material for the sake of simplicity, cost, durability, and strength.

11. As for **Claim 6**, neither Suzuki, nor Sugitani et al., nor Yuen specify the material or method of construction of the printhead ink reservoir assembly. While Sugitani et al. show the particulars of the nozzles (inlet apertures); Sugitani et al. doesn't specify a number of air inlet openings that are treated to be hydrophobic to permit the ingress of air into the ink reservoirs as ink is fed from the ink reservoirs and to inhibit the egress of ink.

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However, the Examiner respectfully takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of incorporating a number of air inlet openings that are treated to be hydrophobic are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have treated a number of air inlet openings that are treated to be hydrophobic for the sake of reducing corrosion and enhancing the ability to clean and maintain the printhead.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Sinh Tran can be reached on 571.272.7564. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/
Primary Examiner
Group Art Unit 2622
November 8, 2008**